

TEST REPORT



中国认可
国际互认
检测
TESTING
CNAS L2292

Report No: TW2205381S

File reference No: 2022-06-27

Applicant: TFIVE PTY LTD

Product: LED Bulb T1 (Tunable White)

Model No: LEDLBT1-L01

Trade mark: Aqara

Test Standards: IEC 62560:2011+A1:2015,
AS/NZS 62560:2017+A1:2019

Test result: The safety testing has been performed on the submitted samples and found in compliance with the above standard version with Australia and New Zealand deviation.

Approved By

White Liu

Manager

Dated: 2022-06-27

Results appearing herein relate only to the sample tested
The technical reports is issued errors and omissions exempt
and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park
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TEST REPORT
IEC 62560
Self-Ballasted LED-Lamp
for general lighting services by voltage > 50V Safety specifications

Report Number..... : TW2205381S

Date of issue..... : 2022-06-27

Total number of pages : 13 (not including attachments)

Name of Testing Laboratory preparing the Report : Shenzhen Timeway Testing Laboratories.

Applicant's name : TFIVE PTY LTD

Address..... : 10/29 Lorne Ave Killara NSW 2071 Australia

Test specification:

Standard : IEC 62560:2011, AMD1:2015

Test procedure : Type test

Non-standard test method : N/A

Test Report Form No. : IEC62560C

Test Report Form(s) Originator : DEKRA Certification B.V.

Master TRF : Dated 2018-12-21

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description..... : LED Bulb T1 (Tunable White)

Trade Mark..... : Aqara

Manufacturer : Lumi United Technology Co., Ltd

Address: Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China

Model/Type reference..... : LEDLBT1-L01

Ratings..... : 220-240V~, 50/60Hz, 8.5W, E27



Responsible Testing Laboratory:		
<input checked="" type="checkbox"/> Testing Laboratory:	Shenzhen Timeway Testing Laboratories.	
Testing location/ address	Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China	
Tested by (name, function, signature)	David Guo (Handler)	
Checked by (name, function, signature)	White Liu (Reviewer)	
List of Attachments (including a total number of pages in each attachment): Attachment 1: AUSTRALIA / NEW ZEALAND NATIONAL DIFFERENCES of IEC 62560:2011+A1:2015 (6 pages); Attachment 2: Photographs of the items tested (6 pages).		
Summary of testing:		
Tests performed (name of test and test clause): The submitted samples were found to comply with the requirements of above specification. - IEC 62560:2011+A1:2015, - AS/NZS 62560:2017+A1:2019	Testing location: Shenzhen Timeway Testing Laboratories. Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China	
Summary of compliance with National Differences (List of countries addressed): AUSTRALIA / NEW ZEALAND		

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.




Remark:

The height of the letters is not less than 2mm.



Test item particulars.....:					
Lamp Cap.....: E27					
IP number.....: IP 20					
Possible test case verdicts:					
- test case does not apply to the test object..... : N/A					
- test object does meet the requirement..... : P (Pass)					
- test object does not meet the requirement..... : F (Fail)					
Testing.....:					
Date of receipt of test item: 2022-05-31					
Date (s) of performance of tests: 2022-05-31 to 2022-06-27					
General remarks:					
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.					
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.					
Manufacturer's Declaration per sub-clause 4.2.5 of IEC62502:					
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable	
When differences exist; they shall be identified in the General product information section.					
Name and address of factory (ies).....: --					
General product information:					
Self-ballasted LED lamp for general lighting purpose use.					
Model No.	Rated Current (A)	Rated Power (W)	Lamp Cap	LED Qty (pcs)	Housing material
LEDLBT1-L01	0.042	8.5W	E27	28	Plastic enclosure (aluminium within) and transparent cover

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		--
4.1	The lamp shall be so designed and constructed that in normal use cause no danger to the user.		P
4.2	Self-ballasted LED-Lamp are non-repairable.		P
5	MARKING		--
5.1	Mandatory marking		P
	- mark of origin		P
	- rated supply voltage (V)	220-240	P
	- rated wattage (W)	8.5W	P
	- rated frequency (Hz)	50/60	P
5.2	Addition marking		P
	- rated current (A)	42mA	P
	- weight significantly higher	Warning: Increased weight of lamp may reduce the mechanical stability of certain luminaires and lampholders and may impair contact making and lamp retention (in the instruction manual)	P
	- special conditions or restrictions		N/A
	Not suitable for dimming; symbol used 		N/A
	- not suitable for water contact	Refer to user manual	P
5.3	Marking durable and legible		P
	rubbing 15 s water, 15 s petroleum; marking legible		P
6	INTERCHANGEABILITY		--
6.1	Cap interchangeability in accordance with IEC 60061-1		P
	Gauge in accordance with IEC 60061-3		P
6.2	Bending moment and mass imparted by the lamp at the lampholder		P
	Bending moment imparted by the lamp at the lampholder (Nm)	Max. 0.07Nm	P
	Mass not exceeding value table 2 or as specified in IEC 60061-1 (kg)	0.06kg	P
7	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		--
	Internal, basic insulated or live metal parts not accessible	Lamp cap was considered and fulfilled.	P

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
	Tested with a test finger with a force of 10 N		P
	Compliance checked with appropriate gauges		P
8	INSULATION RESISTANCE AND ELECTRIC STRENGTH		--
8.2	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MΩ):		P
	≥ 4 MΩ for double or reinforced insulation: >10MΩ		P
8.3	Immediately after clause 8.2 electric strength test for 1 min		P
	Double or reinforced insulation, 4U + 2000 V	2960V	P
	No flashover or breakdown		P
9	MECHANICAL STRENGTH		--
9.2.1	Torsion resistance of unused lamps		P
	B15d or E14 Cap..... 1,15 Nm		N/A
	B22d, E26, E26d or E27 Cap..... 3,0 Nm	E27	P
	E11 or E12 Cap..... 0,8 Nm		N/A
	E17 Cap 1,5 Nm		N/A
	E39 or E40 Cap..... 5,0 Nm		N/A
	GX53 Cap 3,0 Nm		N/A
9.3	Compliance criteria		P
	Clause 8 shall comply after the mechanical strength test.		P
9.4	Axial strength of Edison caps		P
	After full insertion into the gauge an axial force of Table 4 is applied to the central contact (N):	120N	P
	The insulation around the central contact shall remain intact		P
10	CAP TEMPERATURE RISE		--
	The cap temperature rise Δt_s of the lamp shall not exceed 120 K.	Max. 27.6K	P
11	RESISTANCE TO HEAT		--
	Parts of insulating material providing protection against electric shock, retaining live parts in position, ball-pressure test:	(see appended table)	P
12	RESISTANCE TO FLAME AND IGNITION		--
	External parts of insulating material preventing electric shock glow-wire test 650 °C	(see appended table)	P



IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
13	FAULT CONDITIONS		--
13.2	Fault conditions: where diagram indicates fault condition impairs safety, electronic components have been short-circuited or disconnected	(see appended table)	P
13.3	When operated under fault conditions the lamp		P
	- does not emit flames or molten material		P
	- does not produce flammable gases or smoke		P
	- live parts not accessible		P
	After the tests the insulation resistance with d.c. 1000 V complies with requirements of Cl. 8.1 :	>10MΩ	P
14 (16)	CREEPAGE DISTANCES AND CLEARANCES		--
	Creepage distances and clearances according to IEC 61347-1	(see appended table)	P
	Conductive accessible parts according to IEC 60598-1	(see appended table)	P
15	ABNORMAL OPERATION		--
	Non-dimmable self-ballasted lamps are tested on a dimmer or an electronic switch according the test circuit shown in Figure 8		N/A
	Operate the lamp for 8 h at most onerous dimming level		N/A
	When operated under abnormal operation the lamp		N/A
	- does not catch fire		N/A
	- does not produce flammable gases		N/A
	- live parts not accessible		N/A
16	TEST CONDITIONS FOR DIMMABLE LAMPS		--
	Test are carried out at maximum power setting for Clause 10 and Clause 17		P
17	PHOTOBIOLOGICAL SAFETY		--
17.1	UV radiation		N/A
	The LED lamp doesn't exceed 2mW/klm		N/A
17.2	Blue light hazard		P
	Assessed according to IEC TR 62778		P
	LED lamps shall be RG0 or RG1	RG0	P



IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
18	INGRESS PROTECTION		--
18.1	Lamps shall be suitable for water contact unless marked with Figure 6		N/A
18.2	The lamp is subjected to an IPX4 test according to IEC 60598-1		N/A
	The lamp complies with the compliance provisions of 9.2 of IEC 60598-1		N/A
	Lamps constructed so that it is sealed to exclude water need not to be tested		N/A

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

11	TABLE: Ball Pressure Test of Thermoplastics				P
Allowed impression diameter (mm) :			≤2.0mm		—
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Plastic enclosure		See CDF	125	0.7	
Transparent cover		See CDF	125	0.4	
PCB of LED driver		See CDF	143.2	0.4	
Supplementary information:					

12	TABLE: Resistance to heat and fire - Glow wire tests			P
Object/ Part No./ Material	Manufacturer/ trademark	Glow wire test (GWT); (°C)		Verdict
		750°C (Considered Australia deviation)		--
		te	ti	
Plastic enclosure	See CDF	0	0	Pass
Transparent cover	See CDF	0	0	Pass
PCB of LED driver	See CDF	0	0	Pass
Supplementary information:				

13	TABLE: tests of fault conditions		P
Part	Simulated fault	Result	Hazard
RV1	240V, short circuit	Fusing resistor F1 opened immediately.	No
DB1 Pin 1-2	240V, short circuit	Fusing resistor F1 opened immediately.	No
C1	240V, short circuit	Fusing resistor F1 opened immediately.	No
One LED	240V, short circuit	The LED shut off, others LED normal operation, can be recoverable.	No
One LED	240V, open circuit	All LED shut off, can be recoverable.	No
Remark: 1. All the tests were done after the lamp reached stable condition, repeat 3 times testing for those tests of fuse broken 2. After the tests, when the lamp has returned to ambient temperature, the insulation resistance measured at approximately 500V d.c not less than 1 M			



IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

14	TABLE: Clearance And Creepage Distance Measurements					P
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
L and N on PCB	--	240	1.5	3.0	2.5	3.0
Different polarity of fusing resistor F1	--	240	1.5	3.0	2.5	3.0
Live parts and accessible enclosure	--	240	3.0	>5.5	5.0	>5.5
Supplementary information: Non-SELV appliance						

	Appended table: Heating test, thermocouples			P
	Model No.:		LEDLBT1-L01	—
	Test voltage (V):		240V254.4V	—
	Wattage(W) / current(A)		8.0W/0.040A8.1W/0.038A	—
	Ambient (°C):		40.0	—
Thermocouple locations		Measured temp. (°C)		limits (°C)
		240V	254.4V	
E27 cap		25.9K	27.6K	120K
Input lead wire		--	74.7	105
L1 body		--	103.5	130
L2 winding		--	111.3	130
E-cap C2 body		--	103.1	105
U3 body (considered as PCB)		--	118.2	Ref.
PCB of LED module (near LED)		--	119.1	Ref.
Plastic enclosure (outside)		--	76.8	90
Transparent cover (outside)		--	62.7	90
Supplementary information: Considered lamp cap up and down, recorded the maximum value.				



IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Lamp cap	GUANGDONG CASUN LIGHTING TECHNOLOGY CO., LTD	E27	Aluminum nickel plating	IEC 62560	Tested with appliance
Plastic enclosure	GUANGDONG GREA T MATERIALS CO., L TD	TCP.PA- PS28A TC(XXX)(f1)	V-0, 120°C	UL 94	UL E464888, Tested with appliance
Transparent cover	XIAMEN TIANYU PLASTIC INDUSTRY CO LTD	PC-DV	V-2, 80°C	UL 94	UL E309739, Tested with appliance
Input lead wire	Xiamen Xin Cheng Da Electric Co., Ltd.	1569	VW-1, 300V, 24AGW, 105°C	UL 758	UL E322113
PCB	Xiamen Xinantaifa Industrial Co., Ltd.	ATF-04, ATF-05	V-0, 130°C	UL796	UL E201516
Alternative	Boluo Yiyang Electronics Co., Ltd.	YY-02, YY-04	V-0, 130°C	UL796	UL E364546
Heat shrinkable tube	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	125°C	UL 224	UL E203950
PCB for LED module	Xiamen Led Board Electron-Tech Co., Ltd.	LDB-03, LDB-04, LDB-09, LDB-10, LDB-11	V-0, 130°C	UL796	UL E347474
Fusing resistor F1	Zhang zhou Shenghuaou Electronic Technology Co Ltd.	RXF-1W	1W, 100Ω	IEC 62560	UL E321729,
Alternative	Shenzhen Great Electronics Co., Ltd.	RXF-1W	1W, 10Ω	IEC 62560	UL E301541
Inductor L2	Changing Bocheng Electronics Co., Ltd.	DR6*8/ 2.0mH	2.0mH	IEC 62560	Tested with appliance
- bobbin	ZHEJIANG JIAMIN PLASTIC CO LTD	PF2A4-161J	V-0, 150°C	UL 94	UL E231508
- Magnet wire	WUXI JUFENG COMPOUND LINE CO LTD	2UEW	180°C	UL 1446	UL E206882
LED	XIAMEN HI-LIGHT LIGHTING CO.,LTD	Zigbee A19	220-240 V / 50 Hz 8.5W	IEC 62778	Test with appliance



IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
<p>Supplementary information:</p> <p>¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.</p> <p>The codes above have the following meaning:</p> <p>A - The component is replaceable with another one, also certified, with equivalent characteristics</p> <p>B - The component is replaceable if authorised by the test house</p> <p>C - Integrated component tested together with the appliance</p> <p>D - Alternative component</p>			



Attachment No: 1
Report No.: TW2205381S

IEC 62560 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62560 (AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES (Self-ballasted LED-lamps for general lighting services by voltage > 50 V- Safety Specifications)			
Differences according to.....: AS/NZS 62560:2017 + A1:2019			
Attachment Form No.....: AU_NZ_ND_IEC62560B			
Attachment Originator: JAS-ANZ			
Master Attachment: 2019-10			
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	National Differences	--
Appendix ZZ	VARIATIONS TO IEC 62560, Ed. 1.1: 2015 FOR APPLICATION IN AUSTRALIA AND NEW ZEALAND	P
ZZ1	Variations to IEC 62560:2011+AMD1:2015 CSV form the Australian/New Zealand variations for the purposes of the IECEE Scheme for recognition of testing to Standards for safety of electrical equipment (the CB Scheme).	P
ZZ2	VARIATIONS	--
1	Deletion <i>Delete first dash item</i>	--
2	Addition <i>Add the following normative references:</i> <ul style="list-style-type: none"> • AS/NZS 3117, <i>Approval and test specification—Bayonet lampholders</i> • AS/NZS 3140, <i>Approval and test specification—Edison screw lampholder</i> • AS/NZS 60238, <i>Edison screw lampholders (IEC 60238, Ed. 8.2 (2011) MOD)</i> • AS/NZS 60598.1, <i>Luminaires—Part 1: General requirements and tests (IEC 60598-1, Ed. 7.0 (2008) MOD)</i> • AS/NZS 60695.2.10, <i>Glowing/hot wire based test methods—Part 2.10: Glow-wire apparatus and common test procedure (IEC 60695-2-10:2000, IDT)</i> • AS/NZS 60695.11.5, <i>Fire hazard testing—Part 11.5: Needle-flame test method—Apparatus, confirmatory test arrangement and guidance (IEC 60695-11-5 Ed 1.0, IDT)</i> • AS/NZS 60695.11.10, <i>Fire hazard testing—Part 11.10: Test flames—50 W horizontal and vertical flame test methods (IEC 60695-11-10:1999, IDT)</i> • AS/NZS 61184, <i>Bayonet lampholders (IEC 61184, Ed. 3.1 (2011) MOD)</i> 	P



Attachment No: 1
Report No.: TW2205381S

IEC 62560 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.1	<p><i>Variation</i> <i>Delete</i> Clause and <i>replace</i> with the following: self-ballasted LED-lamp unit which is provided with a lamp cap for means of connection to supply and incorporates a light emitting semiconductor light source and any additional elements, necessary for stable operation of the light source, that are integral components of the device. NOTE Requirements for lamp caps are given in IEC 60061-1</p>		P
4.1.1	<p><i>Addition</i> <i>Add</i> the following new Clause: 4.1.1 Test voltage In Australia, equipment other than class III equipment that is intended for connection to the supply mains and is not marked with:</p> <ul style="list-style-type: none">– a rated voltage of at least 240 V for single phase equipment or a rated voltage of at least 415 V for three phase equipment; or– a rated voltage range that includes 240 V for single phase equipment and 415 V for three phase equipment, <p>the rated voltage is equal to 240 V for single phase equipment and 415 V for three phase equipment, and the upper limit of the voltage range is equal to 240 V for single phase equipment and 415 V for three phase equipment.</p>		P
4.2	<p><i>Variation</i> <i>Delete</i> existing paragraph and <i>replace</i> with the following: 4.2..... Self-ballasted LED-lamps shall be non-repairable, factory sealed units that cannot be dismantled without causing permanent damage</p>		P
6.1	<p><i>Addition</i> <i>Insert</i> the following text after the second paragraph: <i>Alternatively for Edison screw lampholders, compliance with Clause 6.1 is checked by measurement and by inserting the lamp cap into a lampholder complying with AS/NZS 3140 or AS/NZS 60238 to ensure compatibility.</i></p>		P



Attachment No: 1
Report No.: TW2205381S

IEC 62560 ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict																								
	<i>Alternatively for bayonet cap lampholders, compliance with Clauses 5.1 and 5.2 is checked by measurement and by inserting the lamp cap into a lampholder complying with AS/NZS 3117 or AS/NZS 61184 to ensure compatibility.</i>																										
Table 1	<p>Add the following 5 new entries to the Table:</p> <table border="1"> <thead> <tr> <th>Lamp cap</th><th>Cap sheet no. from IEC 60061-1</th><th>Cap dimension to be checked by the gauge</th><th>Gauge sheet no. from IEC 60061-3</th></tr> </thead> <tbody> <tr> <td>E39</td><td>7004-24A</td><td>Max. dimensions of the screw thread Min. major diameter of the screw thread Contact making</td><td>7006-24B 7006-24C 7006-24A</td></tr> <tr> <td>E40</td><td>7004-24</td><td>Max. dimensions of the screw thread Min. major diameter of the screw thread Protection against accidental contact Contact making</td><td>7006-23 7006-24 7006-53 7006-52</td></tr> <tr> <td>R7s</td><td>7004-92</td><td>Go for pairs of holders Protection against accidental contact for pairs of holders</td><td>7006-62 7006-62B-1</td></tr> <tr> <td>RX7s</td><td>7004-92A</td><td>Go for pairs of holders RX7s protection against accidental contact for pairs of holders</td><td>7006-62A-2 7006-62C-1</td></tr> <tr> <td>G9</td><td>7004-129</td><td>Go gauge for lamp holder Minimum retention force Contact making</td><td>7006-129B 7006-129C 7006-129D</td></tr> </tbody> </table>		Lamp cap	Cap sheet no. from IEC 60061-1	Cap dimension to be checked by the gauge	Gauge sheet no. from IEC 60061-3	E39	7004-24A	Max. dimensions of the screw thread Min. major diameter of the screw thread Contact making	7006-24B 7006-24C 7006-24A	E40	7004-24	Max. dimensions of the screw thread Min. major diameter of the screw thread Protection against accidental contact Contact making	7006-23 7006-24 7006-53 7006-52	R7s	7004-92	Go for pairs of holders Protection against accidental contact for pairs of holders	7006-62 7006-62B-1	RX7s	7004-92A	Go for pairs of holders RX7s protection against accidental contact for pairs of holders	7006-62A-2 7006-62C-1	G9	7004-129	Go gauge for lamp holder Minimum retention force Contact making	7006-129B 7006-129C 7006-129D	N/A
Lamp cap	Cap sheet no. from IEC 60061-1	Cap dimension to be checked by the gauge	Gauge sheet no. from IEC 60061-3																								
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G9	7004-129	Go gauge for lamp holder Minimum retention force Contact making	7006-129B 7006-129C 7006-129D																								
7	<p>Variation</p> <p>1. <i>Delete fourth paragraph and replace with the following: Compliance is checked by measurement or with the aid of a gauge in accordance with the current edition of IEC 60061-3, sheet 7006-51A for E27 caps and sheet 7006-55 for E14 caps.</i></p>		P																								



Attachment No: 1
Report No.: TW2205381S

IEC 62560 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	2. <i>Insert</i> the following after ninth paragraph: All accessible parts shall be separated from live parts by double or reinforced insulation.		P
10	Variation <i>Delete</i> Clause and <i>replace</i> with the following: 10 Endurance and thermal tests 10.1 General The provisions of Section 12 of AS/NZS 60598.1 and Clauses 10.2 and 10.3 shall apply.		P
	10.2 Endurance The test duration shall be 240 h (i.e. 10 × 24 normal operations).		P
	10.3 Surface temperature compliance Any accessible surface temperature of the lamp shall be not higher than 73°C for metallic surfaces and 90°C for non-metallic surfaces. NOTE These temperature limits were derived from the upper limits of touch temperature from IEC Guide 117. The surface temperature of inaccessible parts of the lamp cap shall be not higher than 145°C.		P
12	Variation <i>Delete</i> Clause and <i>replace</i> with the following: 12 Resistance to flame and ignition 12.1 General Parts made of non-metallic material shall be resistant to flame and ignition. For materials other than ceramic, compliance is checked by the tests specified in Clauses 12.2, 12.3, 12.4 and 12.5 as appropriate. This Clause does not apply to decorative trims, knobs, wiring insulation and other parts not likely to be ignited or to propagate flames from inside the lamp. This Clause applies to all other parts, including components even if they have been tested to their own standard.		P
	12.2 Non-metallic material that supports		P



Attachment No: 1
Report No.: TW2205381S

IEC 62560 ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	<p>current-carrying connections</p> <p>Parts made of non-metallic material that supports current-carrying connections shall withstand the following tests:</p> <p><i>Parts are subjected to a test using a nickel-chromium glow-wire.</i></p> <p><i>The test apparatus and test procedure shall be those described in AS/NZS 60695.2.10.</i></p> <p><i>The glow-wire is heated to 750°C and applied to the test sample for 30 s.</i></p> <p><i>For all tests, any flame or glowing of the sample shall extinguish within 30 s of withdrawing the glow-wire, and any burning or molten drop shall not ignite a single layer of tissue paper, as specified in Clause 4.187 of ISO 4046-4, spread out horizontally 200 mm \pm 5 mm below the sample.</i></p>		
	<p>12.3 All other parts made of non-metallic material</p> <p><i>All other parts made of non-metallic material shall withstand the following test:</i></p> <p><i>Parts are subjected to a test using a nickel-chromium glow-wire.</i></p> <p><i>The test apparatus and test procedure shall be those described in AS/NZS 60695.2.10.</i></p> <p><i>The glow-wire is heated to 650°C and applied to the test sample for 30 s.</i></p> <p><i>For all tests, any flame or glowing of the sample shall extinguish within 30 s of withdrawing the glow-wire, and any burning or molten drop shall not ignite a single layer of tissue paper, as specified in Clause 4.187 of ISO 4046-4, spread out horizontally 200 mm \pm 5 mm below the sample.</i></p>		P
	<p>12.4 Consequential needle flame test</p> <p>During the application of the 750°C glow-wire test of Clause 12.2, if a flame is produced that persists for longer than 2 s the lamp shall be further tested as follows:</p> <p><i>The needle-flame test of AS/NZS 60695.11.5 is applied to non-metallic parts that encroach within the envelope of a vertical cylinder having a diameter of 20 mm and a height of</i></p>		P



Attachment No: 1
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IEC 62560 ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
	<p><i>50 mm above the point of application of the glow-wire. The needle-flame is applied to the test sample for 30 s.</i></p> <p><i>Parts shielded by a barrier that meets the needle-flame test of AS/NZS 60695.11.5 are not tested.</i></p> <p><i>The duration of burning shall not exceed 30 s after removal of the test flame and any burning drop shall not ignite the underlying parts or tissue paper specified in Clause 4.187 of ISO 4046-4, spread out horizontally 200 mm ± 5 mm below the sample.</i></p> <p><i>The needle-flame test is not carried out on parts that are made of material classified as V-0 or V-1 according to AS/NZS 60695.11.10. The sample of material submitted to the test of AS/NZS 60695.11.10 shall be no thicker than the relevant part</i></p>		
	<p>12.5 PCB needle flame test</p> <p><i>PCBs shall be subjected to the needle flame test of AS/NZS 60695.11.5. The needle-flame shall be applied for 30 s on an edge of the PCB at least 10 mm from a corner.</i></p> <p><i>The duration of burning shall not exceed 15 s after removal of the needle-flame and any burning droplets shall not ignite the tissue paper placed underneath the PCB.</i></p> <p><i>The needle-flame test is not carried out on PCBs made of material that is V0 rated according to AS/NZS 60695.11.10.</i></p>		P
Bibliography	<p><i>Addition</i></p> <p><i>Add the following:</i></p> <p><i>IEC Guide 117, Electrotechnical equipment—Temperatures of touchable hot surfaces</i></p>		--

	Special national conditions (if any)		--
4.101	Self-ballasted LED lamps shall not be constructed to represent a model, person or animal, such that by its design and materials is likely to be treated by a child as a toy.		P

Details of: **Outside View 1**

Label
position



Details of: **Outside View 2**



Details of: **Outside View 3**



Details of: **Internal View 1**



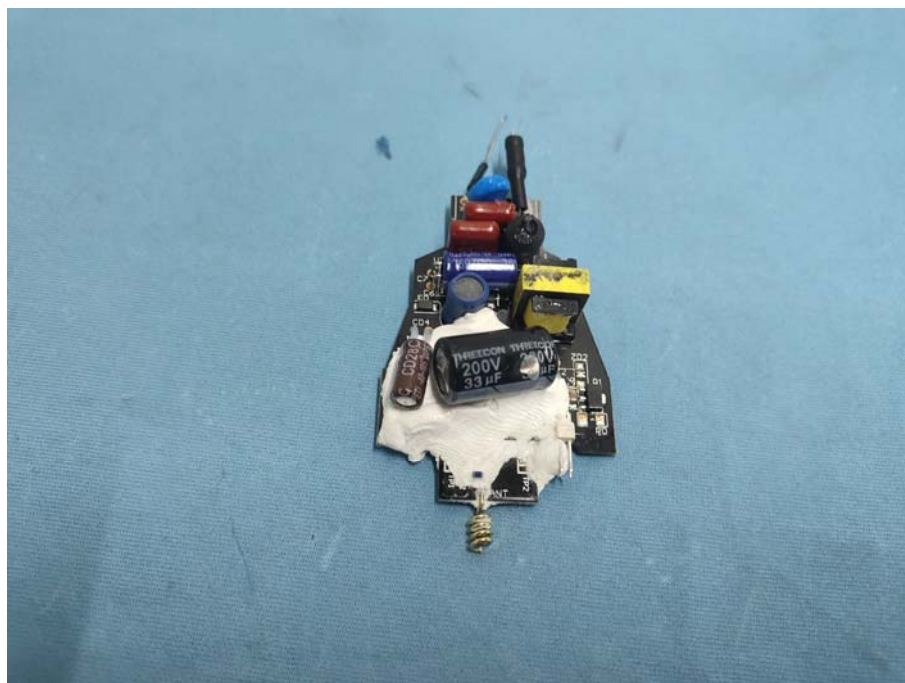
Details of: **Internal View 2**



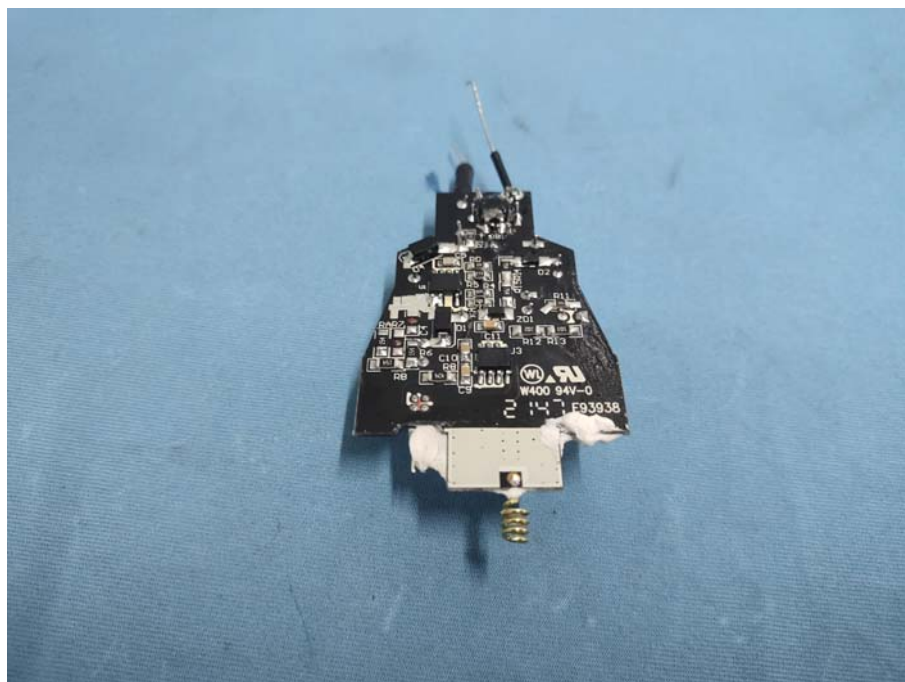
Details of: **Internal View 3**



Details of: **Internal View 4**



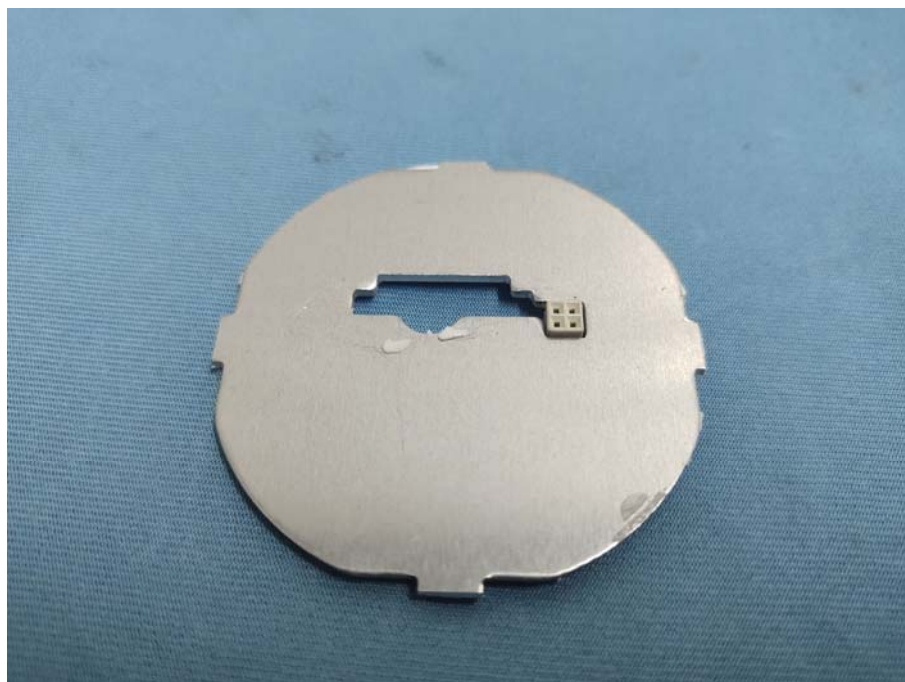
Details of: **Internal View 5**



Details of: **Internal View 6**



Details of: **Internal View 7**



Details of: **Internal View 8**

